

A PROCESS FOR MAKING BLOOM-FREE
THERMOPLASTIC POLYURETHANE COMPOSITIONS

ABSTRACT OF THE DISCLOSURE

A method for making a bloom-free thermoplastic polyurethane is disclosed. The method entails blending a chain terminator such as monofunctional alkylene alcohol having at least 14 carbon atoms, mono-isocyanate and mono-amine, in a thermoplastic polyurethane that would, but for the blending of the chain terminator of the invention, feature a blooming defect. The polyurethane suitable for the use in the inventive process is the product of a reaction wherein reactants comprise (i) at least one hydroxy functional polyol such as polyester polyol, polyether polyol and polycarbonate polyol, having a number average molecular weight of 500 to 5000 and a hydroxyl functionality of at least 2, (ii) a chain extending compound, and (iii) an organic diisocyanate. The ratio NCO/H characterizing the relative amounts of named reactants is 0.95 to 1.05. The addition of the chain terminator renders the product bloom-free.